

Express Mail No.: EV339986888US

WHAT IS CLAIMED IS:

1. A system for dispensing a liquid, said system comprising

a reservoir comprising a plurality of apertures disposed therein; and

at least one dispenser in flow communication with said reservoir, said dispenser comprising a first and a second tube operatively coupled to said reservoir.
2. A system in accordance with Claim 1 wherein said reservoir further comprises a first inlet aperture disposed therein and configured to receive the liquid in said reservoir, a second inlet disposed therein and configured to receive an overflow liquid from said second tube, and an outlet aperture disposed therein and configured to deliver the liquid by gravity to said reservoir to said first tube.
3. A system in accordance with Claim 1 further comprising a first check valve in flow communication with said first tube.
4. A system in accordance with Claim 3 further comprising a second check valve in flow communication with said second tube.
5. A system in accordance with Claim 1 wherein said dispenser further comprises a body comprising a trough and a cover pivotably coupled to said body and configured to dispense the liquid when said cover is in the open position.
6. A system in accordance with Claim 1 wherein said reservoir is coupled to a pressure generator selected from the group consisting of an air compressor, an air cartridge, a spring-loaded, sealed diaphragm, and a screw-driven, sealed diaphragm.
7. A system in accordance with Claim 1 further comprising a pump in flow communication with said reservoir and said dispenser, said pump is a pump selected from the group consisting of a mechanical pump, an electromechanical pump, and an electric pump.

Express Mail No.: EV339986888US

8. A system in accordance with Claim 1 wherein said reservoir is filled with a liquid, said liquid is a liquid selected from the group consisting of a liquid detergent and a rinse agent.

9. A system in accordance with Claim 1 wherein said reservoir comprises a cartridge removably coupled to said reservoir housing, said cartridge filled with at least one liquid.

10. A system for dispensing a liquid detergent for a dishwasher door assembly, said system comprising

a reservoir coupled to the door assembly and comprising a housing including a first inlet aperture, a second inlet aperture, and an outlet aperture operatively disposed therein;

a plurality of tubes in flow communication with said reservoir; and

a dispenser comprising a plurality of check valves and a body, said check valves configured to direct the liquid detergent in one direction, said body comprising a trough and a cover pivotably coupled to said body configured to dispense the liquid detergent.

11. A system in accordance with Claim 10 further comprising a pump comprising a check valve in flow communication with said reservoir and said dispenser, said pump is a pump selected from the group consisting of a bulb actuated mechanical pump, a lever actuated mechanical pump, and a solenoid-driven electric pump.

12. A system in accordance with Claim 10 wherein said pump is a piston-type pump, said pump pivotably coupled to a door assembly hinge such that the liquid detergent is pumped from said reservoir into said dispenser when the door assembly is moved between a closed position and an open position.

Express Mail No.: EV339986888US

13. A system in accordance with Claim 10 wherein said reservoir comprises a pressure generator selected from the group consisting of an air pump, a spring-loaded piston, and a screw-driven piston.

14. A system in accordance with Claim 10 wherein said reservoir further comprises a plurality of angled walls and a check valve mounted to an upper portion of said reservoir, said angled walls configured to slope towards said reservoir outlet aperture, said check valve configured to vent air during filling of said reservoir with a liquid.

15. A system in accordance with Claim 10 wherein said reservoir comprises a reservoir assembly coupled to a pump assembly, said pump assembly and said reservoir assembly positioned outside said door assembly.

16. A dishwasher comprising:

a cabinet comprising a tub having a front opening and a door assembly forming a wash chamber;

at least one system for dispensing a liquid, said system in flow communication with said wash chamber, said system comprising:

a reservoir coupled to said door assembly and comprising a housing including an inlet aperture and an outlet aperture operatively disposed therein, said inlet configured to receive the liquid in said reservoir, said outlet aperture configured to facilitate passage of the liquid from said reservoir;

a plurality of tubes in flow communication with said reservoir;
and

a dispenser in flow communication with said reservoir and said plurality of tubes, said dispenser comprising a check valve and a body, said check valve configured to receive the liquid from said tube in a first direction only, said body comprising a trough and a cover pivotably coupled to said body configured to dispense the liquid into the dishwasher.

Express Mail No.: EV339986888US

17. A dishwasher in accordance with Claim 16 further comprising a pump coupled to a check valve and in flow communication with said reservoir and said dispenser, said pump is a pump selected from the group consisting of a bulb actuated mechanical pump, a lever actuated mechanical pump, and a solenoid-driven electric pump.

18. A dishwasher in accordance with Claim 16 wherein said reservoir includes a cartridge removably coupled inside said reservoir housing, said cartridge filled with a liquid selected from the group consisting of a liquid detergent and a rinse agent.

19. A dishwasher in accordance with Claim 16 wherein said reservoir comprises a reservoir assembly coupled to a pump assembly, said pump assembly and said reservoir assembly positioned outside said dishwasher.

20. A dishwasher in accordance with Claim 16 wherein said reservoir is filled with a liquid selected from the group consisting of a liquid detergent and a rinse agent.